

The Soviet Economic System

Part I

General Ennis, gentlemen of the Army War College:

It is a pleasure to be back at Carlisle Barracks again and to have the opportunity to speak to you on the subject of, "The Soviet Economic System." When I received your kind invitation, I noticed that I was down for two lectures instead of the usual one. My immediate reaction was that such scheduling represented a tribute to the fortitude and endurance of the offices of the United States Army. Two hours of [REDACTED] should be rewarded by the peacetime counterpart of the Purple Heart; perhaps a new decoration we can call the "Purple Ear."

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I propose to begin with a brief sketch of the Russian economy in 1913. This year is the base for many Soviet studies and claims. There is a great amount of misinformation about the size of the economy the Communists inherited from the Tsars.

On the one hand, the Soviets try to picture prerevolutionary Russia as the counterpart of Black Africa today. The official myth about the relative backwardness of Imperial Russia has been deliberately created so that Communist economic achievements since that time will appear to be even greater than they in fact have been.

On the other hand, certain Western writers have, in my opinion, grossly overstated the output of Russian industry in 1913 in order to play down and pooh pooh its growth since the

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Communist takeover. The Soviet party line would have you believe that in 1913, Russian industrial output was less than 7 percent of that of the United States in the same year. In contrast, the work of Professor Nutter, as I understand it, leads him to the conclusion that this figure should be 22 percent. In absolute size, then, we are confronted with a range of 300 percent in these estimates. To borrow a simile from the Canine world, we are told that, in the last years of the Tsars, Russian industry resembled either a toothless, underfed lap dog or else a full-grown German shepherd, fully able to remove your head in one easy bite.

Recently, the most respected economist in the Soviet Union, Academician Strumilin, published a pamphlet which, in effect demolished official Communist claims.^{1/} He placed 1913 Russian output at 11-12 percent of that of the US. Having passed his 80th birthday, Strumilin undoubtedly felt that he could write objectively and survive. On the same subject, a carefully prepared post World War II League of Nations study placed 1913 Russian output at slightly over 12 percent of that of the U.S.^{2/} Other independent studies have reached comparable conclusions.

^{1/} Strumilin, On the Paths of Building Communism (Na putyakh postroeniia Kommunizma), Moscow 1959.

^{2/} League of Nations, Industry and Foreign Trade, Geneva, 1945.

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The weight of evidence, as I see it, would place pre-revolutionary Russia as the sixth or seventh largest industrial power of its time. While backward by then existing Western European standards of per capita output, Russia was not as underdeveloped as either India or China is today.

Further Russia had in hand many of the keys for rapid economic development, which were, of course, taken over by the Communists.

First, there was a modest industrial base which had been growing at a rate of about 5 percent a year for the previous 50 years.

Secondly, savings had reached the respectable rate of about 10 percent of national income, which is above the "takeoff" threshold.

Third, its agricultural output was not only able to provide an adequate diet for its people, but also to generate an export surplus. There was, therefore, no pressure of population against food resources.

Finally, the country was richly endowed with coal, iron ore, and other materials which are the essentials for building heavy industry.

So much for what existed at the time of takeover. The first major problems that faced the revolutionists were political and military -- to get Russia out of the war with Germany, to bring the internal civil war to a successful conclusion, and to resolve the battle for control within the Communist Party itself

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which followed the death of Lenin in 1924. By 1928, three important developments had taken place:

First, Stalin had emerged as the absolute victor in the internal power struggle.

Second, the economy had finally been restored to its pre-revolutionary level of output, and

Third, out of the murky dogma of Marxism and Leninism, the surviving Communist leadership had molded a program of economic action which was to serve for the long-run future.

The central theme of the program for economic action, which has remained unchanged, is forced draft industrialization. One of the best descriptions of Soviet economic policy was made by Oscar Lange, formerly a professor of economics at the University of Chicago, who returned to his native Poland after the Communist takeover, and now serves as the principal economic advisor to Gomulka. Mr. Lange said,

"The Soviet economy was planned ... for one single purpose, namely, the most rapid industrialization ... Soviet economic planning did not serve the objectives of a harmonious socialist welfare economy, but served political and military objectives to which all other aspects of economic planning were sacrificed."^{1/}

^{1/} Oscar Lange, "The Working Principles of the Soviet Economy," in USSR Economy and the War, New York, 1943.

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In other words, the Soviet economy was and still is, shaped to serve the purposes of the State, not of the people. Having decided on the objective of forced draft industrialization, the Communists leadership proceeded to implement their decision through the mechanism of detailed plans, rigid allocation of resources, and the use of force where necessary. The creation of a formidable military machine was, of course, a prime objective of the industrialization drive. A logical result is that the Soviet Union has treated the welfare of its people as a minimum requirement in planning, and essentially as a residual in plan execution.

One can see this basic fact by examining how total output, or gross national product, was allocated in the USSR last year, and compare this with the division of the production pie in the United States.

(Briefing Aid 1)

You can see that:

1. Soviet GNP in total was less than half that of the US -- about 45 percent of ours.
2. However, consumption, or what the consumers received in Russia, was only about one-third of the goods and services our people enjoyed. Because of the larger Soviet population, this means that on a per capita basis, the disparity in living standards was even greater than this chart shows.

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3. Total Soviet investment, in contrast, was equal to about 90 percent of our own. Their investment in industry, measured in dollars, was equal to ours. It is this long-standing practice of plowing back every ruble possible into capital goods investment that is responsible for the rapid growth of Soviet industry. The major reasons why total U.S. investment was higher was because of our far greater construction of commercial facilities (shopping centers, drive-in movies and the like), and because of our vast road building program.

4. Finally, Soviet outlays for the military establishment were about equal to ours, in absolute dollar terms. As a proportion of gross national product, they are devoting about twice as much to military purposes as we are.

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The relative levels of industrial production in the two countries are not strikingly different than the ratios of gross national product. That is, Soviet industrial production this year will probably be close to 45 percent of our own.

However, the output of capital goods in the USSR is higher than this overall ratio. Indeed, Soviet production of certain basic materials and producer goods is already about equal to that of the United States. On the other hand, their output of consumer goods is far below corresponding U.S. levels. Let's look

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at some specific figures.

(Briefing Aid 2)

1. You can see that last year, Soviet output of coal exceeded ours by about 30 percent.

2. Their output of machine tools was almost $4\frac{1}{2}$ times our own.

3. Soviet output of steel was about 70 percent of ours. However, the end use pattern of steel was far different in the two countries.

4. Moving over to the consumer goods side of the chart, you can see that Soviet output of automobiles, washing machines and refrigerators was only a small fraction of our own. This was what I had reference to when I said that the use patterns for steel were quite different in the two countries. The Soviets use most of their steel to produce capital goods and to expand their basic materials industries. As this chart shows, we do not.

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To summarize the first part of this presentation, I think it is fair to say that the Soviets have succeeded in what they set out to do. Within a span of 30 years, they have developed an industrial base which is second only to that of the United States. This

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industrial base, in turn, has created the material needed to support not only large, well-equipped conventional military forces, but also advanced nuclear-weapon delivery systems technologically equal to those of the West.

I do not conclude from this that secret of Soviet success lies in greater efficiency. On the contrary, compared to the leading free enterprise economies of the West, the Soviet economy today is relatively inefficient.

Let me show you a few figures.

(Briefing Aid 3)

1. This chart first compares total population in the U.S. with that of the USSR. We have about 177 million people in our country compared to over 210 million in the present borders of the USSR.

2. Of this total, the Soviets have nearly 100 million in the civilian labor force. This is a high participation rate; somewhat over 47 percent. In contrast, only about 38 percent of our population, or 67 million, are in the labor force.

3. As far as agricultural employment is concerned, the USSR still has the bulk of its labor force on the farms. And with almost 47 million people in agriculture, the Soviet Union produces somewhat less food than does the United States, which has only 7 million farm workers. It is not surprising that the USSR has

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sent several agricultural delegations to the United States as part of the East-West exchange program. They have also welcomed American farm experts to the Soviet Union, and are trying to find out how we do it.

4. Turning to industry, you can see that the USSR has nearly 4 million more persons in industry, or about 20 percent more than the United States. At the same time, the value of U.S. industrial output is more than twice that of the Soviet Union. This means that productivity in Soviet industry is less than 40 percent of that in the United States.

5. In contrast, we concentrate most of our labor force in the service industries - trade and government, most prominently.

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The very low level of productivity in agriculture and the relatively low productivity in industry exist despite massive efforts in education and particularly in technical training.

The Soviet regime has placed great stress on education in engineering and science. Even in their eight and ten year schools, the curriculum is heavily weighted on the side of science and mathematics. The higher educational institutes, of which there are 375, increase this emphasis. About two-thirds of all graduates are in the scientific or technical fields. In the USSR, these institutes offer five or six year courses of study which are geared to the requirements of a particular industry, such as aviation. The

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universities, of course, offer much broader training centered around a major field, such as chemistry.

This directed program has brought the Soviet Union to the point where it now has numerical superiority over the United States in certain fields. For example, there are now about 976,000 engineering graduates employed in the USSR, or almost 90 percent more than in the U.S.

Whether or not this headlong turning out of engineering graduates makes the best possible sense is a matter of debate. There are many competent observers who believe Soviet quantitative superiority presents a real challenge to the West. I do not share this view. For example, the Soviets employ many engineers as factory foremen. In the U.S., these jobs are filled by people who usually have some technical training, but who are not college graduates.

Further, there is no counterpart in Soviet education of the graduate and undergraduate schools of business administration, such as those at Harvard and Columbia. This means that most supervisory and management positions in Soviet industry, as well as in government, are filled by engineers.

Finally, not only is the output of U.S. industry well over twice that of the Soviet Union, but also product design changes in our country are far more frequent. To sum up, I find it impossible to conclude that one Soviet engineer equals one American engineer.

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One final point on professional manpower. In science, including both the physical and biological fields, the United States has a substantial numerical lead. Not only do we have more than twice as many scientists employed as do the Soviets, but our lead will increase over the next five years. It may be that we have not had enough of our scientists working on the problems of greatest national policy importance. If so, this is a fault of allocation and not a lack of numbers.

So much for education the direction in which it is being channelled, and its effect on Soviet economic development to date. I turn now to the organization of control over economic decisions and their implementation in the Soviet Union.

First of all, the Communist Party is in complete charge of both policy formulation and execution. At the apex, the highest council is the Party Presidium. This body of 14 members is presided over by Khrushchev, who is First Secretary. The military leaders, the secret police, and the professional industrial managers no longer have a direct voice in this council.

The Secretariat of the Presidium is the group responsible for day-to-day interpretation of policy. Of its ten current members, only one, Suslov, has a tenure longer than Khrushchev, and thus is the sole member who does not owe his present position to Mr. Khrushchev.

We are now ready to examine the economic chain of command.

(Briefing Aid 4)

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1. At the top left, you can see the Presidium of the Party which we have already discussed.

2. In the center is the Presidium of the Council of Ministers, of which Khrushchev is also chairman. This is the top governmental body charged with the implementation of policy, that is, with carrying out decisions of the Party leadership. The two first deputies are Mikoyan and Kozlov. Kozlov is a former Leningrad party boss, who is now the designated "heir apparent." You may remember his visit to the United States earlier this year.

3. The reorganization of industry and planning, carried out in the latter half of 1957, has greatly enhanced the role of Gosplan. Gosplan is not only responsible for developing short and long-term economic plans, but is also partially responsible for plan execution. Its new chairman is Kosygin, who is also a deputy chairman of the Council of Ministers.

4. There are a number of State Committees - for Automation and Machine Building, for Labor and Wages, and for Scientific and Technical matters. These committees clearly have important functions, but by their very nature are of lesser rank than Gosplan.

5. Returning to the center of the chart, the Council of Ministers is directly responsible to its Presidium. Several members of Gosplan are also members of the Council of Ministers. Also, the Council has a more political flavor than formerly because members of the 15 Union Republics sit on it.

6. The Union Republics have direct control of the regional councils of national economy in their respective territories. These

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councils of national economy, or sovnarhozy, are responsible for well over three-fourths of industrial output. Most of the remainder is under the control of local governments.

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The reorganization of 1957, then, substituted a pattern of territorial control over industrial plants. It replaced the previous pattern of direct control from the center by specialized industrial ministries. Each one of the republics and regional councils is under the direction of the Communist Party.

The major beneficiaries of the Party's reestablished dominance are the apparatchiki the people who run the party machinery. Khrushchev's personal attention to economic matters, his persistent demands that party people master a knowledge of economics, and the establishment of special courses for party workers, all reflect the increased role of the Party in the day-to-day operation of the economy.

This is a shift away from past control of industry by the technical-engineering elite -- the former industrial ministers. To date, the shift seems to have been a success. Industrial production maintained the same rate of growth in 1958 which it enjoyed under the old setup in 1957, and has moved ahead even more rapidly in the first half of 1959.

To move on, I should like to review for you, in very brief fashion, the elements of the national economic plan. Actually,

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there are 13 interrelated sub-plans which make up the whole, and on our next chart the more important ones are highlighted.

(Briefing Aid 5)

1. Aggregate Indices of Activity. These are monetary estimates of such key elements as gross value of output for industry, agriculture, transport, the volume of retail and foreign trade, the value of capital investment, and so forth.
2. Production. This sub-plan consists of the output schedules for specific commodities in physical units in great detail and is the most important part of the over-all plan.
3. Material Technical Supply. Given the production goals, a schedule of allocations is drawn up designed to provide each producing unit with the amount of raw materials, semifinished goods, and capital equipment needed to meet its production goals. The material balance technique utilizes a series of technological coefficients, or input-output ratios. Gosplan centrally administers the supply of over 1,000 commodities.
4. Capital Investment. The capital investment sub-plan has two primary functions. First, it provides the increased capital stock estimated to be necessary to meet future production goals. Second, it distributes investment resources in accordance with the priority preferences decided upon by the Soviet leaders.
5. Technology. The introduction of new technological processes has been a separate sub-plan since 1941. The need for industrial innovation has become much more important within the past

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year because of the need to increase labor productivity. The State Committee on Science and Technology has been retained as an independent body reporting directly to the Council of Ministers, one of two such committees which were retained in the reorganization of 1957.

6. Labor and Cadres. This part of the plan schedules increments to the non-agricultural labor force in accordance with over-all production goals and the planned average increase in output per worker. It also covers technical training plans.

7. Cost of Production (Sebestoimost). These are production cost estimates prepared for each commodity and essential service, which are combined to provide an estimate to total costs. Because of time limitations, I shall skip over the next three items as well as the final two, and turn to the

11. State Budget. The primary function of the state budget is to mobilize the financial resources of the economy and to direct their flow to accomplish the production objectives. The most important financial resource flows are, on the income side, the income from profits of enterprises and the turnover tax. On the expenditure side, the most important allocations are to investment and defense.

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As you have no doubt already concluded, the whole system is a statistician's idea of heaven. Dealing with all the paper work is undoubtedly more fun than working on the production line. Apparently many Russians think so too. Evidence of this are the constantly recurring drives to cut down on the size of the bureaucracy.

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In practice, the national economic plan and its subcomponents is developed according to a system of rigid priorities. A limited number of industries has been consistently favored in the allocation of resources. These include the so-called "leading links" -- electric power, fuels, metallurgy, and the key engineering and defense industries. Once the output goals for these sectors have been decided upon, and the necessary inputs provided for, the bulk of available resources have been committed. Everyone becomes caught up in the tempo of plan fulfillment. Production is the great god -- it is more important than money, or people, or machines.

A logical consequence of setting highly ambitious production goals is that the Soviet economy is chronically short of everything. Machinery, transportation and people are worked at, or close to, maximum possible limits. To some Western observers, these outward manifestations are considered evidence that the economy is out of joint. They notice the uneven tempo of production, the use of very old equipment in industry, particularly in consumer goods factories, and the resort of some plant managers to extra-legal methods of operation.

But viewed through the eyes of the Russian leaders, the scene appears very different. They decided on the relative priorities to pull a backward nation up by its industrial bootstraps. They planned it that way. In large measure, they have achieved the results they were after.

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To conclude the first part of our survey, I propose to discuss briefly the major shifts in Soviet domestic and foreign economic policy since the death of Stalin.

With respect to Soviet policy toward its own people, we can characterize the Stalin period as embodying a combination of the "small carrot" and the "big stick." The Khrushchev period, on the other hand has been marked by bigger carrots and smaller sticks. I refer not only to the relaxation of police terror, but also to the greater attention paid to living standards. In part, I think, this shift back to the methods of Lenin rather than following the example of Stalin is a reflection of Khrushchev's own personality. He prefers to command by the persuasive force of his arguments rather than by the fear he inspires.

However, his method of leadership also reflects the realities of the post-Stalin years. The USSR had arrived at a time in its history when labor was no longer an abundant commodity. The low birth of World War II, combined with high infant mortality, meant that the population of working age was going to be virtually static for a number of years. It had been growing at an annual rate of from one to two million persons a year. To keep industrial growth rates high, it was clear that labor productivity would have to increase sharply. The program designed to achieve this result can be divided broadly into two parts. First, the measures designed to secure greater cooperation of the workers by improving their diet and housing conditions. Second, the drive to improve industrial technology.

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For many years, agriculture was a stepchild in the distribution of investment funds. Collectivization in the 1930's, by insuring an urban food supply in good years and bad, freed industry for over two decades from the restraints which might have been imposed by the low level of agricultural output. Stagnation in agriculture was dramatically revealed in 1954, when total grain output was lower than in 1937. Of course, per capita output was very much lower. Further, livestock herds were smaller than in 1928. In 1954, the Sino-Soviet Bloc as a whole became a net importer of food for the first time in history. The Soviet diet was not only uninspiring, it was also a drag on worker incentives. A typical complaint of Soviet workers, when asked to increase output, had been -- "why work harder to earn more rubles when all they will buy is more black bread?"

The deficiencies in the 1955 Soviet diet can best be understood by comparing it with the way our own people were eating.

(Briefing Aid 6)

1. You can see that the Soviet diet was adequate in calories. However, it was overwhelmingly made up of grain and potatoes - 73% of the total in the USSR compared with only 28% in the United States.
2. Further, the Russian diet was deficient in fats and oils - 8% of the total in the USSR compared to 13% in the U.S.
3. The widest discrepancy was in meat. In the United States, 13% of the daily intake of calories was accounted for by meat and fish, compared to only 4% in the USSR.

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At the core of Khrushchev's agricultural program were the "new lands" and corn projects. Even though the "new lands" grain program pushed cultivation into distinctly marginal areas, it has been successful. About 75 million acres were reclaimed, about half in Siberia and half in Kazakhstan. The corn project, carried out in the traditional farming areas, was the backbone of the meat and milk drive. Khrushchev set a goal of "Americanizing" the Soviet diet by 1960-61.

While these overly ambitious goals have not been met, agricultural output has moved up 50 percent in five years. The Soviet population as a whole is eating better today than ever before.

The second major program concerned housing. At the time of the death of Stalin, housing conditions were worse than they had been under the Czar. In terms of living space per person, the Soviet Union provided its citizens with less than half the housing space that the Italians enjoyed. And Italy, by Western European standards, (to say nothing of the United States) was not providing lavish quarters for its population.

The immediate Soviet goal was to bring about a 25 percent increase in living space per capita by 1960, compared to 1954. The longer term plan is to put an end to the housing shortage in 10 to 12 years.

The housing situation remains extremely difficult, but the spectacular new construction has begun to have physical and morale

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effects. Even if still in one room, Russian urban families now have some hope. They often talk of an uncle, cousin or friend who has a modest apartment at last. Earlier this year, a Moscow taxi driver told a friend of mine,

"Ten years ago there was no hope. In 1954 there was a ten year waiting list. Now it is down to six years. I put my name down in 1956 when we were married, and I have every hope of an apartment by 1962."

The Soviet leaders expect that labor productivity gains will result from better housing. This, they hope, will more than offset retarding effects of the diversion of investment funds away from building industrial plant to home construction. But there is a good deal of truth in Paul Henri Spaak's remark that it is more difficult to provide all members of the community with a roof, shoes, and meat than it is to launch an earth satellite.

Turning from the consumer welfare program, I would like to outline briefly the other major post-Stalin development, that is, the drive to improve technology.

The Soviet leaders renounced two points of doctrine to clear the way for a program of technical advancement. The first was that obsolescence was peculiar to capitalism and could not occur in a socialist economy. This doctrine had the effect of justifying the use of inefficient machinery until it was finally beyond repair.

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The second point of doctrine was that Soviet excellence made a study of capitalist accomplishments unnecessary, and even unpatriotic. This policy, which was part of a broader campaign against "kowtowing to the West," had to be ridiculed and replaced by insistence on constant attention to the technical achievements of capitalism. As part of the program of borrowing technology from the West, the Soviets embarked on a broad exchange program -- visits by Soviet personnel to steel plants, electronics producing facilities and many others -- in exchange for reciprocal visits to the USSR. During 1959, about 1,000 Soviet representatives of industry and science will visit the United States. Others will tour modern production facilities in Western Europe.

As part of the same idea, the USSR began to step up its trade with the industrial West, particularly imports of machinery and equipment.

Let me show you some figures

(Briefing Aid 7)

1. You can see that Soviet imports from the industrial West rose from a low point in 1953 of about \$350 million to about \$780 million by 1957. Machinery and equipment imports accounted for between 35 and 40 percent of the total throughout this period.

2. The decline in 1958 was largely a reflection of lower levels of economic activity in the West, and hence in its ability to absorb raw material imports from the Soviet Union. This temporary downturn will probably be reversed in 1959 for the Soviets have been actively buying equipment and complete plants in Western Europe for several

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To summarize this somewhat rambling discourse, I think the following points are most important:

1. When the Communists took over conditions in the Soviet Union were ripe for rapid economic development. The natural and investment resources were at hand; there was no pressure of population against the resource base.
2. The program of forced draft industrialization which the Communist leadership adopted was based on forced draft industrialization at all costs. The necessary correlary was that pre-revolutionary living standards were held constant, or even depressed, while every possible ruble was plowed back into investment in heavy industry.
3. Until the death of Stalin in 1953, the internal policy was one of "big stick" and "little carrot." He maintained this policy for 30 years as the undisputed ruler of the Soviet Union.
4. This course of action has brought the USSR to a position of the second largest industrial economy in the world, able to support a military expenditure program now equal to that of the United States.
5. While Khrushchev has moderated Stalin's repressive policies toward the Soviet consumer somewhat, the basic goals of the USSR remain unchanged. Forced draft industrialization and military power remain the two cardinal points of Soviet policy.

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